Minutes of Meeting #12 of RTCA SC-186 Working Group 3
Development of Revision A of the ADS-B 1090 MHz MOPS
http://adsb.tc.faa.gov/ADS-B/186-subf.htm

The meeting was called to order by Dr. Vince Orlando at 9am on 9 July 2002, at the MIT Lincoln Laboratory Aviation Liaison Office in Washington DC, hosted by Dr. Orlando. Dr. Orlando welcomed all attendees and asked that each attendee introduce themselves and their organization. The attendees included:

Jerry Anderson, FAA – AIR-130	Ron Jones, FAA ASD-140	Bob Saffell, Rockwell Collins
Bob Burns, Titan Corp. FAA TC – ACB-410	James Maynard, UPS Aviation Tech.	Stuart Searight, FAA TC – ACB-420
Gary Furr, Titan Corp, FAA TC – ACB-410	Vince Orlando, MIT Lincoln Lab	Ron Staab, Trios Associates
Dara Gibson, FAA – AIR-130	Tom Pagano, FAA – ACB-410	John Van Dongen, FAA TC, ACB-410
Bill Harman, MIT Lincoln Lab	Stacey Rowlan, L-3 Comm	Gene Wong, FAA – AND-530

1. Following the introductions, the following known regrets to attendance were announced:
    - Bob Semar, United Airlines
    - Pio Blankas, Honeywell

2. Following Agenda Item #2, Vince Orlando made a few introductory remarks regarding the following topics:

    Vince mentioned that Ann Tedford and Costas Tamvaclis co-chaired a committee of representatives from RTCA and Eurocontrol have produced their report. The report was posted on the ADS-B/1090 web site as Working Paper 1090-WP-12-05.

    Vince and Ron Jones discussed that fact that the FAA has released an ADS-B Link Architecture decision. As of 27 June 2002, the FAA Administrator has released a decision stating that: "ADS-B will use a combination of the 1090 MHz Extended Squitter ADS-B Link for air carrier and private/commercial operators of high performance aircraft, and Universal Access Transceiver (UAT) ADS-B Link for the typical general aviation user." Ron went on to say that it is planned that the FAA will install ground stations to handle both the 1090 and UAT data links.

3. Following Agenda Item #4, the Working Group reviewed the Minutes of Meeting #11 held at the conference facilities of Titan Systems, Mays Landing NJ. Hearing no objection or further comment, the Minutes of Meeting #11 were approved as published.

4. Following Agenda Item #5, the Working Group reviewed the locations, dates and times of the next several meetings, which are scheduled. WG-3 continued to plan meetings through the expected presentation of DO-260A to RTCA SC-186 Plenary as shown in the table below:

Dates/Time	Meeting Place
Tuesday, 20 August at 9am through 5pm, Thursday, 22 August 2002	Confirmed at RTCA offices on "L" Street, Washington DC Travel info and lodging details are available on the ADS-B/1090 web site
Monday, 23 Sept at 9am through 5pm, Friday, 27 Sept. 2002	Fall 2002 RTCA SC-186 Plenary confirmed to be scheduled for Monday & Tuesday, 23-24 September 2002, followed by a three (3) day 1090 meeting 25-27 September at Eurocontrol Headquarters, Brussels Belgium Travel info and lodging details are available on the ADS-B/1090 web site

Dates/Time	Meeting Place
Wednesday, 13 Nov at 9am through 4pm, Friday, 15 November 2002	MEETING LOCATION CONFIRMED AT RTCA in DC Travel info and lodging details are available on the ADS-B/1090 web site
Tuesday, 10 Dec at 9am through 5pm, Thursday, 12 December 2002	MEETING LOCATION CONFIRMED AT RTCA in DC Travel info and lodging details are available on the ADS-B/1090 web site
Monday, 27 Jan '03 at 9am through 4pm, Friday, 31 January 2003	*Confirmed at RTCA - PLENARY DATES ARE CONFIRMED* WG-3 meeting on Monday, Tuesday and Wednesday to resolve any comments, and the SC-186 Plenary to approve DO-260A meeting on Thursday and Friday

5. Following Agenda Item #6, the Working Group began discussions on Working Paper WP-12-01R1 offered by Ron Jones as proposed updates to DO-260 required because of changes to Intent Reporting in the approved ADS-B MASPS (DO-242A). The Working Group reviewed WP-12-01R1 in detail and made changes to the document based on discussions during the meeting. A revision to this Working Paper will be posted on the ADS-B/1090 web site as 1090-WP-12-01R2 including all revisions made during the meeting. The Working Group also *agreed* to have Gary Furr integrate WP-12-01R2 into the master DO-260A document for review at the next meeting.

   During the review of WP-12-01R1, several WG-3 members objected to the definition of the NIC_{BARO} field as it was defined by DO-242A. Their concern was one of the potential usage of Gilham encoded altitude and its [lack of] integrity. During the discussion on this topic, the Working Group *agreed* that DO-260A would change the definition of the NIC_{BARO} field from that defined in DO-242A, and the change was made to WP-12-01R2 to reflect this agreement. A *Note* was also drafted by Stacey Rowlan to accompany the NIC_{BARO} paragraph to help clarify the matter. **Action Item 12-02** was accepted by Stuart Searight to convey WG-3 concerns about NIC_{BARO} and Gilham altitude to SC-186 WG-4 for their consideration during their development of the ASA MASPS.

6. Continuing with Agenda Item #6, the Working Group began review and discussions on Working Paper WP-12-02R1 offered by Ron Jones as proposed changes to DO-260 because of modifications to State Vector, Mode Status and On-Condition Report structures in DO-242A. Modifications to DO-260 span sections 2.2.8 through 2.2.10. The Working Group reviewed WP-12-02R1 and a Supplement to WP-12-02R1 that Ron Jones brought to the meeting. Changes identified in the WP-12-02R1 Supplement, as well as changes identified by the Working Group during the review, were captured in a modification to the Working Paper, that will be identified as 1090-WP-12-02R2, which will be posted on the ADS-B/1090 web site after the meeting. The Working Group also *agreed* to have Gary Furr integrate WP-12-02R2 into the master DO-260A document for review at the next meeting.

7. Continuing with Agenda Item #6, the Working Group began review and discussions on Working Paper WP-12-13 offered by Jim Maynard as proposed changes to DO-260 because of modifications to NIC/NAC/SIL and the CC & OM Codes created with the approval of DO-242A. Changes identified by the Working Group during the review, were captured in a modification to the Working Paper, that will be identified as 1090-WP-12-13R1, which will be posted on the ADS-B/1090 web site after the meeting. The Working Group also *agreed* to have Gary Furr integrate WP-12-13R1 into the master DO-260A document for review at the next meeting. Further changes that Jim Maynard believes are necessary will be captured in a future Working Paper to be presented by Jim.

8. The Working Group turned its attention to Agenda Item #8 and the Working Paper WP-12-09 presented by John Van Dongen. WP-12-09 was a result of Action Item 11-01 wherein John was asked to add text describing the RMF decoder preamble detection process to Appendix I, based on

Working Paper WP-11-02. After Working Group discussion, it was decided that the text offered in WP-12-09 was not ready to be included in Appendix I. John will make some revisions and offer the revisions as a Working Paper at the next meeting.

9. The Working Group then began review of Working Paper WP-12-15, presented by William Harman. This Working Paper provided a description of the preamble detection process being used at Lincoln Laboratory. Much of the description is already included in the MOPS in Appendix I, in the original form (in DO-260) and in the updated form, which is available on the ADS-B/1090 web site. But, this Working Paper gives a stand-alone description of the whole process, including additional detail, so that any differences between the Lincoln Laboratory version and the FAA Tech Center version can come to light. **Action Item 12-01** was accepted by John Van Dongen, Bill Harman and Stacey Rowlan to review the preamble detection techniques described in WP-12-09 and WP-12-15 and come up with only one algorithm to make a recommendation to the Working Group to make changes to Section I.4.1.2 for the next meeting.

10. John Van Dongen continued with the presentation of Working Paper WP-12-10, which is the 9th draft of the proposed changes to sections 2.2 and 2.4 with respect to Enhanced Squitter Reception Techniques. The Working Group _**agreed**_ that the text of WP-12-10 was ready to be included in the draft of DO-260A, and so, Gary Furr was directed to integrate the proposed changes into Sections 2.2.4.4 and 2.4.4.4 and present the consolidated DO-260A document for review at the next meeting.

11. The Working Group then turned its attention to Agenda Item 11 and Working Paper WP-12-16 as presented by William Harman. This Working Paper took a look at the difference in reception performance as evaluated by Lincoln Laboratory and by the FAA Tech Center. A number of steps were taken to determine the cause of the differences. WP-12-16 describes what was learned and it was concluded that the FAA Tech Center results are valid. The FAA Tech Center will however additionally look at the pulse widths in an effort to further explore the noted differences in performance.

12. The Working Group then began review of Working Paper WP-12-12 presented by Vince Orlando. This Working Paper was in response to Action Item 11-07, and proposes revised text on the requirement for multi-sample technique in Appendix I. After review, the Working Group _**agreed**_ that the text as proposed in WP-12-12 was accepted for insertion into Appendix I. Gary Furr agreed to integrate the revised text into Appendix I and post the revised file to the ADS-B/1090 web site.

13. In conjunction with Agenda Item #7, the Working Group began review of Working Paper WP-12-03 as presented by William Harman. WP-12-03 is presented in response to Action Item 10-05, which came about as a result of a proposed change to the ADS-B MASPS, which questions the current switching standard for Extended Squitter transmission rate when an aircraft is on the airport surface. The ADS-B MASPS change proposal was to require transmissions at the high rate at all times, even when an aircraft is stationary for a long period of time. Initial analysis performed by Bill of this issue was found to be based on data gathered from a "surveying" GPS receiver. WG-3 decided in an earlier meeting to perform the analysis again on an "avionics" GPS receiver. The results showed that the accuracy behavior was quite different for the avionics receiver. Errors were larger and more variable. Nevertheless, the results shown in WP-12-03 showed that the switching threshold as defined in DO-260 could be reduced significantly. After discussion on this Working Paper, WG-3 _**agreed**_ not to propose any changes to DO-260A at this time. This Working Paper will be added to the Issue Paper maintained by WG-6 on this topic for consideration in DO-242B, and a note of this will be placed onto the 1090 Orphan Issues List so that WG-3 will be prompted to review it in the future, should requirements become clearer in the ADS-B MASPS.

14. The Working Group continued with Agenda Item #7 by beginning review of Working Paper WP-12-04, also presented by William Harman. This Working Paper was a result of work related to Action

Item 10-08. The purpose of this Working Paper was to propose a Diagram to be integrated into Appendix I to clarify the use of the three primary error detection/correction techniques. After Working Group discussion, it was ***agreed*** that the proposed text and diagram would be integrated into section I.4.3.4, and that the diagram would be made to appear more as a standard flow chart with proper decision boxes. Gary Furr will integrate this into Appendix I and post the modification to the ADS-B/1090 web site.

15. As part of Agenda Item #9, the Working Group began review of Working Paper WP-12-06 presented by William Harman. The Working Paper is an update of previous work proposing text for DO-260A with respect to TIS-B Message Processing and Reporting starting with section 2.2.17.4. After review of this Working Paper, WG-3 ***agreed*** that it required further work before being integrated into the draft of DO-260A. Bill Harman and Tom Pagano accepted **Action Item 12-06** to update this Working Paper to ensure that the TIS-B output report is consistent with the ADS-B Report Assembly Function, and to take into consideration the number of tracks necessary.

16. The Working Group continued with Agenda Item #9 with the review of Working Paper WP-12-11 as presented by Vince Orlando. This Working Paper presented a revised draft of Appendix D to include TIS-B ground processing. Based on an agreement at previous a meeting, the TIS-B ground processing material in Appendix D will only address issues specifically related to 1090 MHz. The remainder of the ground processing requirements will be included in a reference to the TIS-B MASPS. All of paragraph D.3 has been revised to incorporate this approach. After discussion, and revisions to the document, which were captured in a revision to this Working Paper to be known as 1090-WP-12-11R1, the Working Group ***agreed*** that the proposed text as modified in 1090-WP-12-11R1 should be included in a revised Appendix D. Gary Furr was directed to integrate 1090-WP-12-11R1 into Appendix D and post the resultant file onto the ADS-B/1090 web site. The revised 1090-WP-12-11R1 will also be posted to the Meeting 12 table after the meeting.

17. William Harman then presented Working Paper WP-12-08, which proposes a correction to a typo in Section 3.3.4.5.2, page 637 of DO-260. This error was originally brought to Bill's attention by Working Group 5, as they had included the same formula for Antenna Location Using Distance-Area Calculations into Section 3 of the UAT MOPS. As it turns out, the error has existed in the TCAS MOPS for about 12 years without anyone realizing it. After a brief review, the Working Group ***agreed*** that the change was necessary and directed Gary Furr to incorporate the change into Section 3.3.4.5.2 and post the revise file onto the ADS-B/1090 web site as part of DO-260A.

18. In conjunction with Agenda Item 11, Vince Orlando presented Working Paper WP-12-14, which had been offered by William Harman. The simulation used at Lincoln Laboratory for Extended Squitter performance assessments models ATCRBS fruit reception times as a Poisson process. This model has now come into question, and appears to be inappropriate. As a result the assessments have been pessimistic. Bill concludes in Working Paper WP-12-14 that the non-Poisson effects are considerable, and that the performance assessments using the Poisson model were significantly inaccurate, and pessimistic relative to the actual system performance. This could account for the difference between the APL results and Lincoln's results for Europe in the future, and probably means that the APL results are more correct. After Working Group discussion, the FAA TC personnel disagreed with the conclusions drawn by Bill. Therefore, **Action Item 12-07** was assigned to Bill Harman and Tom Pagano to contact Al Cameron to discuss the validation of the non-Poisson behavior, based on the fact that Tom Pagano questions the conclusions in WP-12-14.

19. Continuing with Agenda Item #11, Ron Jones presented Working Paper WP-12-07. The Mode S transponder MOPS, DO-181C, specifies the peak output power for a Mode S transponder. Working Paper WP-12-07 proposes that WG-3 consider reducing the range of allowed output power level for class A3 extended squitter airborne installations. There were several objections from the

manufacturers in WG-3 for this proposal, but after discussion, the Working Group did ***agreed*** that a *Note* should be drafted by Ron Jones to be included in Section 2.1. The draft of that Note follows:

Future versions of these MOPS may require that Class A3 1090 MHz ADS-B systems have a transmission capability with a minimum RF peak power of 23 dBW (200 Watts) measured at the antenna terminals. This 2 dB increase from the 21 dBW minimum RF peak power specified by this MOPS and DO-181C may be required in order to support the longer range air-to-air applications (e.g., flight path de-confliction), especially when over-flying moderate to high traffic density airspace.

20. The following **Action Items** were identified at this, or previous, meetings of this Working Group. The asterisk (*) beside a name or organization indicates that they are the lead for the resolution of that Action Item. Actions shown here are those Action Items that remained OPEN at the end of this meeting.

Action Number	Action Description	Assigned to	Status
8-1	Provide the results from testing with the directional 1090 MHz receive antenna. (Flight Tests scheduled for 24-25 April 2002. LDPU had a problem and this may be delayed until Fall 2002)	Carl Jezierski	
9-3	Review WP-9-14 in light of comments raised during Meeting 9.	Bill Harman James Maynard Ed Bayliss	
9-6	Investigate the confidence value parameter for the multi-sample technique without table lookup at 8 MHz sampling rate. Determine whether the new technique is compatible with an 8 MHz rate.	Bill Harman	
9-9	Write a test to verify that the sliding window error correction technique is not used.	Bill Harman Stacey Rowlan	
9-15	Simulate reception, using enhanced surveillance, with a 4 or 6 MHz bandwidth, and compare to the 8MHz bandwidth case.	Bill Harman	
10-2	WG-3 has agreed to delete the Aircraft Operational Coordination Message for the reason that there are no requirements in the ADS-B MASPS which required any of the parameters of the message. This action therefore is to review DO-260 and recommend all of the places where deletion of text is required to extract this message from the document.	Gary Furr	
10-3	Continue work on the Proposed Transmission Rate for the ID Squitter by analyzing the result if the ID Squitter is sent every 5 seconds.	Bill Harman	
12-01	Review the preamble detection techniques described in WP-12-09 and WP-12-15 and come up with only one algorithm to make recommendation to make changes to Appendix I.4.1.2 for meeting 13	Bill Harman John Van Dongen * Stacey Rowlan	
12-02	Relay to WG-4 the concerns that surfaced in WG-3, Meeting 12 concerning Gilham altitude.	Stuart Searight	

Action Number	Action Description	Assigned to	Status
12-03	Review the four pulse preamble detection tests to assure pulse width and position tolerances are correct and that the test is stated in a way that is independent of sample rate.	Stacey Rowlan Bob Saffell	
12-04	Document the signal in space characteristics of the ATCRBS Signal Generator and the log video pulse rise time and width.	Tom Pagano	
12-05	Look at the section of Appendix I on Multi-sample Technique and discuss the two methods. Revise the text to make the Van Dongen method the preferred method, i.e., so that it appears first in the text.	John Van Dongen Bill Harman	
12-06	Update WP-12-06 to ensure that the TIS-B output report is consistent with the ADS-B Report Assembly Function, and take into consideration the number of tracks necessary.	Bill Harman Tom Pagano	
12-07	Contact Al Cameron to discuss the validation of the non-Poisson behavior, based on the fact that Tom questions the conclusions in WP-12-14	Tom Pagano Bill Harman	
12-08	Edit the Mode Status Report in lieu of changes in Figure 2-10 in WP-12-13	Ron Jones	
12-09	Revise the CC tables in proposed section 2.2.3.2.7.3.3 to show both airborne and surface formats	Jim Maynard	

21. The **Working Papers** shown in the following table are specifically for the Meeting being reported in these Meeting Minutes. Working Papers for all WG-3 Meetings, as well as the Meeting Agendas, Meeting Minutes, Meeting Schedules and modifications to DO-260 for the production of Revision A, will be posted on the ADS-B 1090 MHz web site located at:
    http://adsb.tc.faa.gov/ADS-B/186-subf.htm

Working Paper	Size	Description	Introduced At:
1090-WP-12-01R1	98KB	Revision 1 to the Proposed Changes to the 1090 MHz ADS-B MOPS for Intent Reporting, presented by Ron Jones in response to Action Item 11-06	Meeting 12, 7/9/02 MIT-LL Liaison – DC
1090-WP-12-02R1	340KB	Revision 1 to the 1090 MHz ADS-B MOPS Proposed Revisions for ADS-B Report Formats changed in DO-242A, presented by Ron Jones in response to Action Item 11-04	Meeting 12, 7/9/02 MIT-LL Liaison – DC
1090-WP-12-03	102KB	Analysis of GPS Data, in Regard to Extended Squitter Transmission Rates on the Airport Surface, presented by Dr William Harman in response to Action Item 10-5	Meeting 12, 7/9/02 MIT-LL Liaison – DC
1090-WP-12-04	11KB	A Proposed Diagram to Clarify Error Correction in Appendix I, presented by Dr William Harman in response to Action Item 10-8	Meeting 12, 7/9/02 MIT-LL Liaison – DC
1090-WP-12-05	1,341KB	1090 MHz Extended Squitter Assessment Report prepared by the FAA and the Eurocontrol Experimental Centre, presented by Ron Jones, FAA ASD-140	Meeting 12, 7/9/02 MIT-LL Liaison – DC
1090-WP-12-06	20KB	Draft of MOPS Material for TIS-B Message Processing and Reporting, Sections 2.2.17.4 to the end of 2.2.17, presented by Dr William Harman in response to Action Item 11-05	Meeting 12, 7/9/02 MIT-LL Liaison – DC

Working Paper	Size	Description	Introduced At:
1090-WP-12-07	13KB	Output Power Requirements for 1090 ES Transmissions, presented by Ron Jones, FAA ASD-140	Meeting 12, 7/9/02 MIT-LL Liaison – DC
1090-WP-12-08	12KB	The Correction of a Typographical Error in Section 3.3.4.5.2, presented by Dr William Harman	Meeting 12, 7/9/02 MIT-LL Liaison – DC
1090-WP-12-09	20KB	Proposed Text to add to Appendix I as a result of Action Item 11-1, presented by John Van Dongen	Meeting 12, 7/9/02 MIT-LL Liaison – DC
1090-WP-12-10	93KB	Draft 9 of the Proposed Enhanced Surveillance Processing Test Procedures, modified as per Action Items 11-02 and 11-03, presented by John Van Dongen	Meeting 12, 7/9/02 MIT-LL Liaison – DC
1090-WP-12-11	97KB	Proposed Revision to Appendix D to Include TIS-B Ground Processing, presented by Vince Orlando in response to Action Item 9-12	Meeting 12, 7/9/02 MIT-LL Liaison – DC
1090-WP-12-12	10KB	Proposed Revised Text on the Requirement for Multi-Sample Technique in Appendix I, presented by Vince Orlando in response to Action Item 11-07	Meeting 12, 7/9/02 MIT-LL Liaison – DC
1090-WP-12-13	321KB	Proposed Changes for DO-260A in Respect to NIC/NAC/SIL and CC & OM Codes, presented by James Maynard in response to Action Items 10-14, 10-15and 10-16	Meeting 12, 7/9/02 MIT-LL Liaison – DC
1090-WP-12-14	20KB	Non-Poisson Behavior, presented by Dr William Harman	Meeting 12, 7/9/02 MIT-LL Liaison – DC
1090-WP-12-15	20KB	Preamble Detection, Lincoln Laboratory Design, presented by Dr William Harman	Meeting 12, 7/9/02 MIT-LL Liaison – DC
1090-WP-12-16	29KB	Comparing Tech Center and Lincoln Evaluations, presented by Dr William Harman	Meeting 12, 7/9/02 MIT-LL Liaison – DC

22. As per Action Item 4-7, a review of DO-260 was accomplished and the following table of open, or unresolved, issues was generated, along with two issues defined during Meeting #4. WG-3 members should review this list and ensure that there are not other issues known to them that should be on this list. This list will be review at each future meeting for addition or deletion of items.

Issue #	Issue/Question Description	Raised by	Date Raised	Status
1	DO-260 Table 2-11 in Section 2.2.3.2.3.1, NUC$_P$ code for Type Code=22 is still shown as **TBD**	Gary Furr	15 May 01	
2	DO-260 Table 2-30 in Section 2.2.3.2.6.1.13, "Turn Indicator" coding is still **TBD** and the implementer is directed to set the code to ZERO until further notice. If this requirement is deleted, then sections 2.2.3.2.6.2.13, 2.2.3.2.6.3.13, 2.2.3.2.6.4.13, 2.2.5.1.10, 2.2.5.1.15 and 2.2.8.1.19 must also be addressed, along with all of their section 2.4 mates. Also Appendix F, MASPS Ref #R.2.26.	Gary Furr	15 May 01	
3	DO-260 Table 2-43 in Section 2.2.3.2.7.1.4, the "TCP/TCP+1 Data Valid Subfield" was declared not to be useful during the June 2000 Plenary and the field was declared to be "reserved" and set to ZERO in the initial version of the MOPS. Section 2.4.3.2.7.1.4 only tests for the case where the code is set to ZERO. Until this field has validity, no TCP data will be considered valid! All sections relating to TCP/TCP+1 were left as written in the initial DO-260.	Gary Furr	15 May 01	A Note is being added to 2.2.3.2.7.1 to state the status of TCP in DO-260A assuming no changes.

Issue #	Issue/Question Description	Raised by	Date Raised	Status
4	Sections 2.2.3.2.7.3.3.1 through 2.2.3.2.7.3.4.4 defining both the "Capability Classes" and the "Operational Mode" of the Aircraft Operational Status Message, including Tables 2-54 through 2-61 are full of **TBD**s. Also affects Appendix F, MASPS Ref R2.31 and R2.32.			
5	DO-260 Table 2-67 in Section 2.2.8.1.5, the "NUC_P Coding Requirements" contains numerous **TBD**s.	Gary Furr	15 May 01	
6	DO-260 Table A-2 in Section A.4.1, NUC_P code for Type Code=22 is still shown as **TBD**	Gary Furr	15 May 01	
7	DO-260 Section A.4.9.4 was never altered after the June 2000 Plenary which declared the "TCP Data Valid" subfield to be 'reserved' and hard wired to ZERO in the initial DO-260.	Gary Furr	15 May 01	
8	Sections A.4.11.3 through A.4.11.10 defining the CC_4, CC_3, CC_2, CC_1, OM_4, OM_3, OM_2 and OM_1 Operational Capabilities and Statuses are full of **TBD**s	Gary Furr	15 May 01	
9	Appendix F, Ref. #R2.38, the effective coverage of the ground receiver is still **TBD**.	Gary Furr	15 May 01	
10	Implementation of the Working Papers WP-4-03 and WP-4-06 for TCAS RA, are pending a decision by the Ad Hoc MASPS Working Group on the requirement.	WG-3	15 May 01	
11	Address the issue of whether or not to write a requirement into Section 2.2 of DO-260A for using the "Conservative Error Correction Technique."	WG-3	15 May 01	
12	Clarify the need to transmit current TCP/TCP+1. In particular the need to comply in the Test Procedures, in view of the fact that the Data Valid Flag is currently set to zero (0) in DO-260	WG-3	21 Aug 01	
13	Additional changes will need to be made to Tables 2-3, 2-4 and 2-5, and potentially other places in DO-260, if SC-186 approves changes suggested by WG-6 to DO-242A to eliminate the Partial Mode Status Report (MS-P), only produce a standard MS Report, and to put all TCP information into a newly defined "On-Condition" Report.	WG-3	18 Oct 01	
14	WP-12-03 was presented in response to Action Item 10-05, which came about as a result of a proposed change to the ADS-B MASPS, which questions the current switching standard for Extended Squitter transmission rate when an aircraft is on the airport surface. The proposal was to require transmissions at the high rate at all times, even when an aircraft is stationary for a long period of time. After analysis, WG-3 **_agreed_** not to propose any changes to DO-260A, and to review the issue again if it becomes a requirement in DO-242B.	WG-3	17 Jul 02 Meeting 12	